

IN THE CLAIMS

Please amend the claims as shown in the following detailed claim listing. The detailed claim listing is intended to reflect the amendment of previously pending claims 1, 5, 9 and 13; and the addition of new claims 17-24. The specific amendments to individual claims are detailed in the following detailed claim listing.

1. (Currently amended) ~~A method of detecting texture sharing between multiple contexts having unique context ID's comprising:~~

obtaining a texture usage mask of a subject texture;
obtaining an inverted context ID of a subject context;

ANDing the texture usage mask of the subject texture with the inverted context ID of the subject context to produce a resultant value; and

detecting that the subject texture is not being shared by another context with the subject context upon the resultant value being equal to 0 and detecting that the subject texture is being shared by another context with the subject context upon the resultant value not being equal to 0.

2. (Original) The method of claim 1, further comprising:

revising the texture usage mask of a subject texture prior to the subject texture being used by another context by bitwise ORing the texture usage mask with a context ID of the another context to produce a resultant new texture usage mask for the subject texture.

3. (Original) The method of claim 1, further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by deleting a context ID of the particular context from the texture usage mask to produce a resultant new texture usage mask for the subject texture.

4. (Original) The method of claim 2, further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by deleting a context ID of the particular context from the texture usage mask to produce a resultant new texture usage mask for the subject texture.

5. (Currently amended) A method of ~~detecting texture sharing between multiple contexts~~
~~having unique context ID's~~ comprising:

- obtaining a texture usage mask of a subject texture;
- obtaining a context ID of a subject context;
- performing a first logic operation with the texture usage mask of the subject texture and the context ID of the subject context to produce a resultant value; and
- detecting that the subject texture is not being shared by another context with the subject context upon the resultant value being equal to a first predetermined value and detecting that the subject texture is being shared by another context upon the resultant value being equal to a second predetermined value which is different from the first predetermined value.

6. (Original) The method of claim 5, further comprising:

revising the texture usage mask of a subject texture prior to the subject texture being used by another context by performing a second logic operation with the texture usage mask and a context ID of the another context to produce a resultant new texture usage mask for the subject texture.

7. (Original) The method of claim 5, further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by performing a third logic operation with the texture usage mask and a context ID of the particular context to produce a resultant new texture usage mask for the subject texture.

8. (Original) The method of claim 7, further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by performing a third logic operation with the texture usage mask and a context ID of the particular context to produce a resultant new texture usage mask for the subject texture.

9. (Currently amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of ~~detecting texture sharing between multiple contexts having unique context ID's, the method~~ comprising:

obtaining a texture usage mask of a subject texture;

obtaining an inverted context ID of a subject context;

ANDing the texture usage mask of the subject texture with the inverted context ID of the subject context to produce a resultant value; and

detecting that the subject texture is not being shared by another context with the subject context upon the resultant value being equal to 0 and detecting that the subject texture is being shared by another context with the subject context upon the resultant value not being equal to 0.

10. (Original) The program storage device of claim 9, the method further comprising:

revising the texture usage mask of a subject texture prior to the subject texture being used by another context by bitwise ORing the texture usage mask with a context ID of the another context to produce a resultant new texture usage mask for the subject texture.

11. (Original) The program storage device of claim 9, the method further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by deleting a context ID of the particular context from the texture usage mask to produce a resultant new texture usage mask for the subject texture.

12. (Original) The program storage device of claim 11, the method further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by deleting a context ID of the particular context from the texture usage mask to produce a resultant new texture usage mask for the subject texture.

13. (Currently amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of ~~detecting texture sharing between multiple contexts having unique context ID's, the method~~ comprising:

obtaining a texture usage mask of a subject texture;
obtaining a context ID of a subject context;
performing a first logic operation with the texture usage mask of the subject texture and the context ID of the subject context to produce a resultant value; and
detecting that the subject texture is not being shared by another context with the subject context upon the resultant value being equal to a first predetermined value and detecting that the subject texture is being shared by another context upon the resultant value being equal to a second predetermined value which is different from the first predetermined value.

14. (Original) The program storage device of claim 13, the method further comprising:

revising the texture usage mask of a subject texture prior to the subject texture being used by another context by performing a second logic operation with the texture usage mask and a context ID of the another context to produce a resultant new texture usage mask for the subject texture.

15. (Original) The program storage device of claim 13, the method further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by performing a third logic operation with the texture usage mask and a context ID of the particular context to produce a resultant new texture usage mask for the subject texture.

16. (Original) The program storage device of claim 15, the method further comprising:

revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by performing a third logic operation with the texture usage mask and a context ID of the particular context to produce a resultant new texture usage mask for the subject texture.

17. (New) A method comprising:

retrieving a texture usage mask of a texture;
retrieving an inverted context ID of a context;

performing a first type of logical operation of the texture usage mask of the texture with the inverted context ID of the context;

detecting whether the texture is being shared by another context with the context based on the first type of logical operation; and

performing a clear operation, an attach operation and a set operation when one of a number of texture units associated with a context completes the processing of a texture, wherein the clear operation includes clearing the identification of the context in the texture usage mask associated with the texture, the attach operation to include attaching a different texture to the one of the number of texture units that completed the processing of the texture and wherein the set operation includes setting the identification of the context in the texture usage mask for the textures being processed by the number of texture units in the context.

18. (New) The method of claim 17 comprising paging out a texture from a texture memory based on a type of logical operation of the identification of the contexts processing the texture and the texture usage mask of the texture, wherein the type of logical operation is the same as the first type of logical operation.

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19. (New) A system comprising:

a number of texture units to process a number of subject textures, wherein a texture unit of the number of texture units is associated with one of a number of contexts;

a texture memory to store at least one of the number of subject textures;

a system memory to store at least one of the number of subject textures; and

a processor to execute instructions that include the following operations when one of the number of texture units for a context completes the processing of a texture,

clear the identification of the context in the texture usage mask associated with the subject texture;

attach a different subject texture to the one of the number of texture units that completed the processing of the texture; and

set the identification of the context in the texture usage mask for the subject textures being processed by the number of texture units in the context.

20. (New) The system of claim 19 comprising a texture manager to page out a texture from the texture memory to the system memory based on a logical operation of an identification of the contexts to process the texture and the texture usage mask of the texture.

21. (New) The system of claim 19, wherein the logical operation is an AND operation.

22. (New) A system comprising:

a storage device to store texture usage marks of a number of textures and to store context identifiers for a number of contexts;

a random access memory to store at least a part of the number of textures;

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a processor to retrieve a texture usage mark for one of the number of textures and one of the context identifiers for one of the number of contexts from the storage device, wherein the processor is to detect whether a texture is shared among at least two different units associated with at least two different contexts or shared among at least two different units within a same context based on a logical operation of the retrieved texture usage mark and the retrieved context identifier.

23. (New) The system of claim 22, wherein the logical operation is an AND operation.

24. (New) The system of claim 22 comprising,

a texture memory to store at least a part of the number of textures; and

a texture manager to page out a texture from the texture memory to the random access memory based on the logical operation of the retrieved texture usage mark and the retrieved context identifier.
